

Question Paper

Exam Date & Time: 25-May-2023 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Instructions: Answer ALL questions.

Pharmaceutical Microbiology [PBT 2.2T-S1]

Marks: 70

Duration: 180 mins.

Section A

Answer all the questions.

Long Answer Questions (3 x 10 marks = 30 marks)

- 1) Describe the nutritional and physical conditions for growth of aerobic bacteria. Add a note on types of media used. (10)
- 2) With the help of a neat labeled diagram, discuss the design and operation of a hot air oven. (10)
- 3) Write the causative microorganism, mode of transmission, important symptoms, and treatment of Tuberculosis (TB). (10)

Section B

Answer all the questions.

Short Answer Questions (6 x 5 marks = 30 marks)

- 4) Explain any one method for cultivation of virus. (5)
- 5) Define saturated steam. Explain superheated steam with the help of a phase diagram. (5)
- 6) Explain the effect of pH on the course of disinfection. (5)
- 7) Write a note on the major characteristics of bacteria used for classification. (5)
- 8) Citing examples, differentiate active and passive immunity. (5)
- 9) Explain the properties and chemical nature of antigens. (5)

Section C

Answer all the questions.

Give Reasons for the Following (5 x 2 marks = 10 marks)

- 10) *Escherichia coli* and *Enterobacter aerogenes* are morphologically similar and IMVIC test can differentiate the two microorganisms. (2)
- 11) Older cells of *Staphylococcus aureus* give gram variable reaction. (2)
- 12) CMC is superior to RWC. (2)
- 13) Phenolic disinfectants are rapidly inactivated by dilution. (2)
- 14) Microbiological assay of antibiotics differs from microbiological assay of vitamins in terms of growth of test organism. (2)

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